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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,540	07/07/2003	Henrik Siegle	10191/3165	9039
26646	7590	06/17/2005	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			DANG, PHUC T	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

FE

Office Action Summary	Application No.	Applicant(s)	
	10/614,540	SIEGLE ET AL.	
	Examiner	Art Unit	
	PHUC T. DANG	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on election filed on May 23, 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>012604 & 051704</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Restriction/election

1. Applicant's election without traverse of Group I (claims 1-9) filed on May 23, 2005, and canceled Group II (claims 10-18) has been considered.

Applicants have the right to file a divisional application covering the subject matter of the non-elected claims.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The office acknowledges receipt of the following items from the applicant:

Information Disclosure Statement (IDS) filed on January 26, 2004 and May 17, 2004.

Specification

4. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the

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obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4 are rejected under 35 U.S.C. 102 (e) as being anticipated by Sano et al., hereinafter "Sano" (U.S. Publication No. US2002/0030950 A1).

Regarding claim 1, Sano discloses a method of one of adjusting and locally modifying a resulting direction of magnetization in a layer of a magnetoresistive layer system having a ferromagnetic layer and an adjacent antiferromagnetic layer, the ferromagnetic layer having a resulting magnetization with an associated resulting direction of magnetization that is one of induced and influenceable by the adjacent antiferromagnetic layer, the method comprising:

heating at least the antiferromagnetic layer (27, Fig. 6) by a heated stamp over a threshold temperature above which an influence of the antiferromagnetic layer (27, Fig. 6) on the resulting direction of magnetization of the adjacent ferromagnetic layer (26, Fig. 6) at least largely disappears;

exposing at least an area of the ferromagnetic layer (26, Fig. 6) adjacent to the adjacent antiferromagnetic layer (27, Fig. 6) to an external magnetic field of a predefined direction; and

subsequently cooling the antiferromagnetic layer (27, Fig. 6) again below the threshold temperature [see paragraph [0095]].

Regarding claim 2, Sano discloses the cooling is performed by one of removing and cooling the stamp, and a heating is performed one of by a contactless approximation of the stamp to the magnetoresistive layer system and by bringing the stamp into contact with a layer of the magnetoresistive layer system [see paragraph [0095]-[0097]].

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Regarding claim 3, Sano discloses applying the external magnetic field as early as one of at a time of heating to the threshold temperature and after reaching the threshold temperature [see paragraph [0095]-[0097]].

Regarding claim 4, Sano discloses preserving the external magnetic field after application until the cooling below the threshold temperature [see paragraph [0095]-[0097]].

Allowable Subject Matter

6. The following is a statement of reason for the indication of allowable subject matter:

Claims 5-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

None of the prior art made of record does not disclose providing a plurality of magnetoresistive layer systems on a common substrate, the plurality of magnetoresistive layer systems are designed as locally bounded areas to have insulated surfaces having a size of $5\ \mu\text{m}^2$ to $500\ \mu\text{m}^2$, and one of strips having a width of $0.5\ \mu\text{m}$ to $100\ \mu\text{m}$ and a length of $50\ \mu\text{m}$ to $120\ \mu\text{m}$ and a serpentine-shaped structures having the strips, wherein the plurality of magnetoresistive layer systems is heated over the threshold temperature using the stamp one of at least partly consecutively and simultaneously.

Claims 6-9 are depend directly or indirectly on claim 5, then, they also would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

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Conclusion

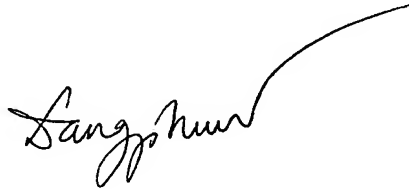
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuc T. Dang whose telephone number is (571) 272-1776. The examiner can normally be reached on 8:00 am-5:00 pm.
8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and After Final communications.
9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Phuc T. Dang

Primary Examiner

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P.D.

A handwritten signature in black ink, appearing to read "Sangphum", with a long, sweeping horizontal line extending to the right.